REMARKS

This is a full and timely response to the non-final Office Action of August 12, 2005.

Reexamination, reconsideration, and allowance of the application and all presently pending

claims are respectfully requested.

Upon entry of this Fifth Response, claims 1-18, 20, 21, and 23-32 are pending in this

application. Claims 1-2, 9-10, 12, 20-21, and 28-30 are directly amended herein. It is

believed that the foregoing amendments add no new matter to the present application.

Information Disclosure Statement

On March 31, 2005, Applicant submitted an Information Disclosure Statement along

with a Form PTO-1449, and a copy of this Form PTO-1449 is attached. Applicant has yet to

receive an initialed copy of the Form PTO-1449. Applicant respectfully requests that an

initialed copy of the Form PTO-1449 be provided in the next action mailed from the Patent

Office.

Response to §102 Rejections

A proper rejection of a claim under 35 U.S.C. §102 requires that a single prior art

reference disclose each element of the claim. See, *e.g.*, *W.L. Gore & Assoc., Inc. v. Garlock,*

Inc., 721 F.2d 1540, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983).

Claim 28

Claim 28 presently stands rejected under 35 U.S.C. §102 as allegedly being anticipated by *Schildkraut* (U.S. Patent No. 6,292,574). Claim 28 reads as follows:

> 28. An automatic image enhancement system, comprising:
> memory for storing digital data that defines a graphical image, said graphical image containing a plurality of faces;
> a face detector configured to detect each of said faces; and
> an image enhancer configured to analyze said faces, said image enhancer further configured to automatically detect and enhance at least one respective facial blemish in each of said faces, *wherein the image enhancer is configured to detect each said facial blemish by searching a respective one of said detected faces for a particular facial feature and determining the likely proximity of the facial blemish relative to the particular facial feature.* (Emphasis added).

Applicant respectfully asserts that *Schildkraut* fails to disclose at least the features of claim 28 highlighted hereinabove. Accordingly, the 35 U.S.C. §102 rejection of claim 28 is improper and should be withdrawn.

In this regard, *Schildkraut* appears to disclose a system that automatically removes eye color defects in a graphical image. However, there is nothing in *Schildkraut* to suggest that such defects are detected by determining "the likely proximity" of such defects relative to a facial feature. Accordingly, *Schildkraut* fails to disclose detecting "each said facial blemish by searching a respective one of said detected faces for a particular facial feature and *determining the likely proximity of the facial blemish relative to the particular facial feature,*" as recited by claim 28. (Emphasis added).

For at least the above reasons, Applicant submits that the cited art fails to disclose each feature of claim 28. Therefore, the 35 U.S.C. §102 rejection of claim 28 should be withdrawn.

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Claim 29

Claim 29 presently stands rejected under 35 U.S.C. §102 as allegedly being anticipated by *Schildkraut*. Claim 29 reads as follows:

> 29.. An automatic image enhancing method, comprising:
> storing digital data that defines a graphical image;
> automatically detecting a plurality of faces in said graphical image;
> automatically analyzing said faces to detect at least one respective facial blemish in each of said faces; and
> automatically enhancing, based on said analyzing, at least one respective facial blemish detected in each of said faces,
> *wherein said analyzing comprises, for each of said faces:*
> *searching the respective face for a particular facial feature;*
> *determining the likely proximity of a facial blemish to be enhanced relative to the particular facial feature; and*
> *locating the facial blemish to be enhanced based on said determining.*
> (Emphasis added).

For at least reasons similar to those set forth above in the arguments for allowance of claim 28, Applicant respectfully asserts that the cited art fails to disclose at least the features of claim 29 highlighted above. Accordingly, the 35 U.S.C. §102 rejection of claim 29 should be withdrawn.

Claim 30

Claim 30 presently stands rejected in the Office Action under 35 U.S.C. §102 as allegedly being anticipated by *Schildkraut*. Applicant submits that the pending dependent claim 30 contains all features of its independent claim 29. Since claim 29 should be allowed, as argued hereinabove, pending dependent claim 30 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

<center>**Response to §103 Rejections**</center>

In order for a claim to be properly rejected under 35 U.S.C. §103, the combined teachings of the prior art references must suggest all features of the claimed invention to one of ordinary skill in the art. See, *e.g., In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981). In addition, "(t)he PTO has the burden under section 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988) (Citations omitted). Furthermore, the Federal Circuit has stated that "(i)t is impermissible, however, to simply engage in hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps." *In re Gorman*, 933 F.2d 982, 987, 18 U.S.P.Q.2d 1885 (1991).

Claim 1

Claim 1 presently stands rejected under 35 U.S.C. §103 as purportedly being unpatentable over *Kinjo* (U.S. Patent No. 6,445,819) and *Hillebrand* (U.S. Patent No. 6,571,003) and in further view of *Lawton* (U.S. Patent No. 6,160,923). Claim 1 reads as follows:

> 1. An automatic image enhancement system, comprising:
> memory for storing digital data that defines a graphical image;
> a face detector configured to analyze said digital data and to automatically identify facial data within said digital data stored in said memory; and
> an image enhancer configured to search said identified facial data for a particular facial feature and to automatically locate a facial blemish defined by a portion of said facial data based on a proximity of said facial blemish relative to said facial feature within said graphical image, said image enhancer further configured to automatically compensate for said facial blemish by automatically manipulating said portion such that an appearance of said facial blemish is enhanced within said graphical image, *wherein said image*

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enhancer is configured to initiate, without user intervention, manipulation of said portion for enhancing said appearance in response to location of said facial blemish by said image enhancer. (Emphasis added).

Applicant respectfully asserts that *Kinjo* in combination with *Hillebrand* and *Lawton* is inadequate to suggest at least the features of claim 1 highlighted hereinabove. Thus, the 35 U.S.C. §103 rejection of claim 1 is improper.

In this regard, it is alleged in the Office Action that *Kinjo* discloses an "image enhancement system" comprising a "face detector." However, it is candidly admitted that *Kinjo* fails to disclose:

> "automatically identifying <u>a facial blemish defined by</u> a portion of said facial data <u>based on a proximity of said facial blemish relative to said facial feature within said graphical image</u> said image enhancer further configured to automatically <u>compensate for said facial blemish by automatically manipulating</u> said portion <u>such that</u> an appearance of said facial feature <u>is enhanced</u> within said graphical image, **wherein said image enhancer is configured to initiate, without user intervention, manipulation of said portion for enhancing said appearance in response to identification of said facial blemish** by said image enhancer." Page 8.

It is further alleged in the Office Action that such features are disclosed by *Hillebrand*.

It appears that *Hillebrand* discloses a system for detecting facial defects. *Hillebrand* teaches that, after a defect is detected, a controller 200 and display 108 "may generate a simulated image showing an improvement and/or worsening to the defect areas." Column 11, lines 46-49. However, it appears that *Hillebrand* suggests initiating the display of such "improvement" based on user intervention. In particular, *Hillebrand* specifically teaches that "Simulating improvements may be useful when the operator is recommending a treatment using a product which eliminates and/or hides skin defects to show the analyzed person the potential benefits of the product(s)." Column 11, lines 53-57. Such a section of *Hillebrand* suggests that display of the "improvement" is to be initiated based on whether a user is recommending a treatment product and possibly which treatment product is being recommended. *Hillebrand* further teaches that:

"The program begins at step 1502 where *the operator enters a magnitude for defect improvement via the input device 212*. For example, if the overall percentile is determined to be the fortieth percentile, then the operator may choose to simulate an improvement of ten percentile points to create an 'average' fiftieth percentile image." Column 12, lines 4-9. (Emphasis added).

Thus, *Hillebrand* fails to teach and, in fact, teaches against "wherein said image enhancer is configured to initiate, *without user intervention*, manipulation of said portion for enhancing said appearance in response to location of said facial blemish by said image enhancer," as described by claim 1. (Emphasis added). A reference "teaches away" from the claimed invention and should not be used to reject the claimed invention under §103 "when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 2 F.3d 551, 31 U.S.P.Q.2d 1130, 1131 (Fed. Cir. 1994).

It is nevertheless argued in the Office Action that:

"With regard to the argued part of the claim in italics above, Hillebrand also discloses wherein the image enhancement occurs without any user intervention (column 6, lines 15-16, column 7, lines 17-21 and 65-66, column 8, lines 33-36, 46-51 and 63-65, column 9, lines 5-7, 15-17 and 26-28, column 10, lines 51-52, column 12, lines 2-3 and 10-14). Hillebrand consistently states, 'in one embodiment the steps are performed by the controller 200.' This declaration is interpreted as the steps in the process take place entirely without user input based on data already programmed into the image processor or controller. Although Hillebrand allows for user input at nearly every step of the process, it is also indicated clearly that in one embodiment, the steps are performed by the controller."

Hillebrand apparently does disclose an embodiment in which much of the functionality being performed is automatic. However, there is not a single embodiment disclosed or suggested in which the simulation described in columns 11 and 12 of *Hillebrand* is automatically initiated in response to the "location" of a "facial blemish," as described by claim 1.

In particular, at column 6, lines 15-16, it is asserted in *Hillebrand* that "(i)n one embodiment, the steps are performed by the controller 200." The described "steps" refer to

the ones depicted in Figure 6 "to determine sub-images." See column 6, lines 11-15.

However, establishing that a "step" is performed by a controller is insufficient for establishing that the "step" is "initiated without user intervention" in response to a particular event, such as a "location" of a "facial blemish." Indeed, a "step" may be "performed" by a controller and yet "initiated" by a user input. Thus, the foregoing teaching at column 6, lines 15-16, of *Hillebrand* is insufficient for suggesting that the "steps" of Figure 6 are "initiated without user intervention." In fact, step 612 of Figure 6 is described by *Hillebrand* as "operator selects several landmarks on the image." See Figure 6. Applicant fails to see how such a step can be initiated or performed "without user intervention."

Applicant observes that several of the other cites provided in the Office Action (e.g., column 7, lines 65-66, and column 10, lines 51-52) similarly teach that various "steps" are "performed by the controller 200." For at least the above reasons, Applicant submits that such cites are insufficient for suggesting that the described steps are "initiated without user intervention" in response to a particular event, such as the alleged "identification." In fact, regarding the "steps" referred to at column 12, lines 2-3, it is specifically asserted in *Hillebrand* that such "steps" are initiated by an "operator" that "enters a magnitude for defect improvement." See column 12, lines 4-5. Moreover, when *Hillebrand* is properly viewed as whole, it becomes clear that the cited teachings referring to "steps" being performed by the "controller" are insufficient for suggesting that such "steps" are to be "initiated without user intervention." "It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." *In re Wesslau*, 353 F.2d 238, 147 U.S.P.Q. 391, 393 (C.C.P.A. 1965)."

At column 7, lines 17-21, it is asserted in *Hillebrand* that "(i)f fully automatic sub-image determination is selected, at step 608 the controller 200 determines..." Such a teaching only suggests that "***sub-image determination***" is "fully automatic" and is notably silent as to any of the other "steps," such as the simulation described in columns 11 and 12 of *Hillebrand*. Notably, the "fully automatic sub-image determination" does ***not*** include ***locating*** a facial blemish. Instead, this locating step occurs ***after*** the sub-images are determined. See column 7, lines 58-61. Thus, teaching that "sub-image determination" may be "fully automatic" is insufficient for suggesting that compensation of a "facial blemish" is to be initiated "without user intervention... in response to location of said facial blemish by said image enhancer," as recited by claim 1.

Further, at column 8, lines 33-36, lines 46-51, and 63-65, and column 9, lines 5-7, 15-17, and 26-28, *Hillebrand* describes numerous "steps" that are apparently performed by the controller 200. However, as set forth above, establishing that a "step" is performed by a controller 200 is insufficient for establishing that the step is initiated "without user intervention" in response to a particular event. Thus, the foregoing cites in *Hillebrand* are insufficient for establishing that any of the described "steps" are ***initiated*** "without user intervention" in response to the alleged "identification."

In responding to similar arguments in the Fourth Response filed on May 31, 2005, it is asserted in the Office Action that:

> "Applicant argues that U.S. Patent 6,571,003 to Hillebrand does not disclose the claimed feature of 'wherein said image enhancer is configured to initiate, without user intervention, manipulation of said portion for enhancing said appearance in response to identification of said portion by said image enhancer.' Examiner disagrees and points out that Hillebrand discloses a totally automatic mode for operation as well as a user-directed mode (column 6, lines 15-16, column 7, lines 17-21 and 65-66, column 8, lines 33-36, 46-51 and 63-65, column 9, lines 5-7, 15-17, and 26-28, column 10, lines 51-52, column 12, lines 2-3 and 10-14). Hillebrand consistently states, 'in one embodiment the steps are performed by the controller 200.' This declaration is interpreted as the steps in the process take place entirely without user input based on data already programmed into the image processor or controller.

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Although Hillebrand allows for user input at nearly every step of the process, it is also indicated clearly that in one embodiment, the steps are performed by the controller without user input. Rejection is maintained and the action is made final." Pages 4-5.

However, for at least the reasons just set forth above, Applicant submits that the phrases in *Hillebrand* of "in one embodiment the steps are performed by the controller 200" and "fully automatic sub-image determination" cannot be construed to mean that each step of the described process is initiated without user intervention. Indeed, although the phrases suggest that *some* steps are "fully automatic" (e.g., "sub-image determination"), neither of the foregoing phrases suggests that the particular step of compensating a "facial blemish" is initiated "without user intervention... in response to location of said facial blemish."

Moreover, in the Office Action, it is further asserted that:

"For the sake of argument, if it cannot be agreed as to whether or not Hillebrand allows for user intervention before the manipulation of said portion for enhancing said appearance in response to identification of said facial blemish by said image enhancer, Examiner points to the reference of U.S. Patent 6,160,923 to Lawton et al. Lawton discloses a device to remove spots or anomalies such as facial blemishes (column 3, lines 3-6) wherein once the area of the blemish is identified, the enhancement of the area of the blemish is performed automatically (column 3, lines 13-17) without user intervention. Lawton further teaches that attributes of identified blemishes to be removed are gathered and using those attributes such imperfections can be automatically removed throughout the image without user intervention (column 4, lines 18-25). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to enable automatic image enhancement without user intervention once a blemish has been identified as taught by Lawton to enable automated processing of images in conjunction with the controller operated method of Hillebrand already disclosed." Pages 9-10.

Applicant respectfully asserts that the Office Action fails to establish a sufficient motivation for combining *Lawton* with the teachings of *Kinjo* and *Hillebrand*. In this regard, the Office Action cites no apparent deficiency in *Hillebrand* or *Kinjo* that would motivate someone of ordinary skill in the art to combine the teachings of *Lawton* with the teachings of *Hillebrand* and *Kinjo*. Moreover, where there is no apparent disadvantage present in a particular prior art reference, then generally there can be no motivation to combine the teaching of another

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reference with the particular prior art reference. *Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349, 53 U.S.P.Q.2d 1580 (Fed. Cir. 2000).

Indeed, *Hillebrand* already discloses a system that detects and corrects for facial blemishes. There is no reason or motivation provided by the cited art that would motivate one of ordinary skill in the art to utilize the blemish detection techniques of *Lawton* in lieu of those taught by *Hillebrand*. "Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references." *In re Dembiczcak*, 175 F.3d 994, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999).

In fact, when the cited art is properly considered as a whole, it is apparent that *Hillebrand **teaches against*** the automatic blemish correction techniques allegedly disclosed by *Lawton*. "(P)rior art references before the tribunal must be read as a whole and consideration must be given where the references diverge and teach away from the claimed invention." *Akzo N.V. v. U.S. Intern'l Trade Com'n*, 808 F.2d 1471, 1481, 1 U.S.P.Q.2d 1291 (Fed. Cir. 1986), *cert. denied*, 482 U.S. 909. In particular, when the teachings of *Hillebrand* are properly considered as a whole, it is clear that the purpose of the alleged image improvement performed by the *Hillebrand* system is to aid an operator who is explaining the benefits of using a skin care product to a potential customer. To this end, *Hillebrand* teaches that it is desirable to have the alleged image improvement to be concurrent with the operator's explanation of the product. Indeed, *Hillebrand* specifically teaches that "Simulating improvements may be useful ***when the operator is recommending a treatment*** using a product which eliminates and/or hides skin defects to show the analyzed person the potential benefits of the product(s)." (Emphasis added). Allowing a user to submit inputs for controlling not only the magnitude of improvements, as described above, but also for controlling the timing of the alleged image enhancements appears to be desirable

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in achieving the stated purpose of *Hillebrand*, and obviousness is concerned *not with what is feasible* but rather with what is desirable. *Winner Int'l Royalty corp. v. Wang*, 202 F.3d 1340, 1349, 53 U.S.P.Q.2d 1580 (Fed. Cir. 2000).

For at least the above reasons, Applicant respectfully asserts that the cited art fails to provide a sufficient motivation for combining the teachings of the combination of *Kinjo* and *Hillebrand* with the teachings of *Lawton*. Accordingly, the 35 U.S.C. §103 rejection of claim 1 based on the alleged combination of *Kinjo*, *Hillebrand*, and *Lawton* is improper.

In responding to Applicant's arguments in the Fourth Response filed on May 31, 2005, it is asserted in the Office Action that:

> "computer automation in performing image enhancement versus user
> intervention is an obvious adjustment to the performance of basic computer
> processing. The fact is that once a user tells a computer to perform an
> operation once, it can be performed again without that user intervention
> simply by repeating the operation. That is of course the beauty of computers."
> Page 3.

As set forth above, the issue of obviousness under 35 U.S.C. §103 is not whether the it is *feasible* for a prior art reference to be modified to operate according to the claimed invention but rather whether it is desirable, in view of the teachings of the prior art as a whole, for a prior art reference to be so modified. "Moreover, the question is not simply whether the prior art 'teaches' the particular element of the invention, but whether it would 'suggest the *desirability*, and thus the obviousness of making the combination.'" *ALCO Standard Corp. v. Tennessee Valley Authority*, 808 F.2d 1490, 1498, 1 U.S.P.Q.2d 1337, 1343 (Fed. Cir. 1986) (emphasis added). For at least the reasons set forth above, Applicant respectfully asserts that modifying *Hillebrand* to operate according to the features of pending claim 1 or teachings of *Lawton* is not obvious under the standards set forth by 35 U.S.C. §103.

It is further asserted in the Office Action that:

> "The Applicant argues that Hillebrand suggests and even teaches away from the present invention because Hillebrand teaches that 'the operator enters a magnitude for defect improvement via the input device.' Applicant is reminded that the present invention describes in the specification on page 14, lines 15-22 where the 'user may control the type of image enhancement.' Hillebrand's 'magnitude for defect improvement' is interpreted as the type of image enhancement. The suggestion inferred by the applicant is not considered grounds for the reference to teach away from the invention. Computer programs by their very nature allow for user input at any number of steps along the way to perform the desired operation. Further dependent claim 2 claims an input device for receiving input and wherein facial blemish is selected based on said input." Page 3.

Applicant asserts that the teachings at page 14 of the instant application are consistent with both pending claims 1 and 2. In this regard, the teachings at page 14 disclose an exemplary embodiment in which a user may instruct an image enhancement system to perform a particular *type* of enhancement. In response to and, therefore, after the user input, the image enhancement system automatically locates a "facial blemish" of the type identified by the user. Then, in response to location of the "facial blemish," the image enhancer "without user intervention" compensates the "facial blemish." Although, the user identifies the type of blemish, the image enhancement system automatically locates and then compensates an actual blemish consistent with the identified type. Indeed, the application specifically states that "the user may control the type of image enhancement performed by the image enhancer 21, but the detection of the data defining the particular feature or region to be enhanced and the enhancement of this data are performed *automatically without user intervention*." Page 14, lines 19-22 (emphasis added). Thus, once a blemish is located by the image enhancement system, the blemish is automatically compensated without user intervention. Claim 2 has been amended herein to clearly indicate that the "user input" identifies the "type" of blemish to be enhanced. This input clearly occurs *before* the "location of the facial blemish" recited in claim 1.

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For at least the above reasons, Applicant asserts that the combination of *Kinjo*,

Hillebrand, and *Lawton* fails to suggest at least the features of claim 1 highlighted above.

Accordingly, the 35 U.S.C. §103 rejection of claim 1 should be withdrawn.

Claims 2-8, 23, and 31

Claims 2, 3, 5-8, 28, and 31 presently stand rejected in the Office Action under 35

U.S.C. §103 as allegedly being unpatentable over *Kinjo* and *Hillebrand* in view of *Lawton*.

Further, claim 4 presently stands rejected in the Office Action under 35 U.S.C. §103 as

allegedly being unpatentable over *Kinjo* and *Hillebrand* in view of *Lobo* (U.S. Patent No.

5,835,616). Applicant submits that the pending dependent claims 2-8, 23, and 31 contain all

features of their respective independent claim 1. Since claim 1 should be allowed, as argued

hereinabove, pending dependent claims 2-8, 23, and 31 should be allowed as a matter of law

for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). Furthermore,

these dependent claims recite patentably distinct features and/or combinations of features that

make them allowable, notwithstanding the allowability of their base claim 1.

For example, claim 23 recites "wherein said graphical image contains a plurality of

faces, and wherein said face detector is configured to automatically detect each of said faces

and said image enhancer is configured to automatically enhance each of said detected faces."

For at least the reasons set forth hereinbelow in the arguments for allowance of claim 28,

Applicant respectfully asserts that the cited art fails to suggest the foregoing features of claim

23.

In rejecting claim 23, it is asserted in the Office Action that "*Kinjo* discloses detecting

multiple face candidate regions (Fig. 2, element 102 and Fig. 3)." Applicant observes,

however, that Figure 3 shows multiple "face candidate regions" A-D but only one face.

Thus, a detection of a plurality of "face candidate regions" in Figure 3 does not appear to

constitute a detection of "a plurality of faces," as described by claim 23. Moreover,

Applicant respectfully asserts that the Office Action fails to establish a *prima facie* case of

obviousness with respect to claim 23, and the 35 U.S.C. §103 rejection of claim 23 should be

withdrawn, notwithstanding the allowability of independent claim 1.

Claim 9

Claim 9 presently stands rejected under 35 U.S.C. §103 as purportedly being

unpatentable over *Kinjo* and *Hillebrand* in view of *Lawton*. Claim 9 reads as follows:

> 9. An automatic image enhancement system, comprising:
> means for storing digital data that defines a graphical image;
> face detecting means for analyzing said digital data and for
> automatically identifying facial data within said digital data stored in said
> storing means; and
> image enhancing means for searching said identified facial data for a
> particular facial feature and for automatically locating a facial blemish defined
> by a portion of said facial data based on a proximity of said facial blemish
> relative to said facial feature within said graphical image, *the image
> enhancing means configured to automatically manipulate, upon locating
> said facial blemish, said portion to enhance an appearance of said facial
> blemish within said graphical image*. (Emphasis added).

As described above, *Hillebrand* teaches a system that enhances a facial image. However, for

at least the reasons set forth above in the arguments for allowance of pending claim 1,

Applicant asserts that such enhancement is apparently based on user intervention once the

facial image has been detected. Thus, *Hillebrand* fails to suggest and, in fact, teaches against

automatically manipulating a portion of facial data defining a particular facial feature "upon

location of said facial blemish," as described by claim 9. Further, Applicant asserts that the

foregoing deficiency in *Hillebrand* is not satisfied by *Kinjo*. Further, for at least the reasons

set forth above in the arguments for allowance of claim 1, Applicant asserts that the

combination of *Lawton* with *Kinjo* and *Hillebrand* is improper. Accordingly, Applicant

respectfully asserts that the alleged combination of *Kinjo*, *Hillebrand*, and *Lawton* fails to

suggest each feature of claim 9, and the 35 U.S.C. §103 rejection of this claim should,

therefore, be withdrawn.

Claim 10

Claim 10 presently stands rejected under 35 U.S.C. §103 as purportedly being

unpatentable over *Kinjo* and *Hillebrand* in view of *Lawton*. Claim 10 reads as follows:

> 10. A method for enhancing graphical images, comprising:
> receiving digital data defining a graphical image;
> automatically detecting facial data within said digital data;
> searching said facial data for data that defines a particular facial
> feature;
> automatically locating a facial blemish defined by a set of said digital
> data based on a proximity of said facial blemish relative to said particular
> facial feature within said graphical image; and
> ***automatically compensating for said facial blemish in response to***
> ***said locating without user intervention***, said compensating comprising
> manipulating said set of digital data. (Emphasis added).

For at least the reasons set forth hereinabove in the arguments for allowance of claim 1,

Applicant respectfully asserts that the cited art fails to suggest at least the features of claim

10 highlighted above. Accordingly, the 35 U.S.C. §103 rejection of claim 10 should be

withdrawn.

Claims 11-16, 25, and 32

Claims 11, 12, 14-16, 25, and 32 presently stand rejected in the Office Action under

35 U.S.C. §103 as allegedly being unpatentable over *Kinjo* and *Hillebrand*. Further, claim

13 presently stands rejected in the Office Action under 35 U.S.C. §103 as allegedly being

unpatentable over *Kinjo* and *Hillebrand* in view of *Lobo*. Applicant submits that the pending

dependent claims 11-16, 25, and 32 contain all features of their respective independent claim

10. Since claim 10 should be allowed, as argued hereinabove, pending dependent claims 11-

16, 25, and 32 should be allowed as a matter of law for at least this reason. *In re Fine*, 5

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U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). Furthermore, these dependent claims recite patentably distinct features and/or combinations of features that make them allowable, notwithstanding the allowability of their base claim 10.

For example, claim 25 recites "wherein said graphical image comprises a plurality of faces, wherein said detecting comprises detecting each of said faces, and wherein said method comprises enhancing each of said faces based on said manipulating." For at least the reasons set forth herein in the arguments for allowance of claims 23 and 28, Applicant respectfully asserts that the cited art fails to suggest the foregoing features of claim 25. Accordingly, the 35 U.S.C. §103 rejection of claim 25 should be withdrawn, notwithstanding the allowability of independent claim 10.

Claim 18

Claim 18 presently stands rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Kinjo* and *Hillebrand* in view of *Lawton*. Claim 18 reads as follows:

> 18. An automatic image enhancing system, comprising:
> memory configured to store digital data representative of a graphical image;
> a face detector configured to automatically identify facial data in said digital data; and
> an image enhancer configured to automatically locate a portion of said facial data defining a skin blemish and to locate at least one additional facial feature, wherein said image enhancer is configured to locate said portion of said facial data defining said skin blemish by determining the likely proximity of said skin blemish to said located at least one additional facial feature, and *wherein said image enhancer is further configured to automatically manipulate, upon locating said portion, said portion for enhancing an appearance of said skin blemish within said graphical image*. (Emphasis added).

For at least the reasons set forth hereinabove in the arguments for allowance of claim 9, Applicant respectfully asserts that the cited art fails to suggest at least the features of claim

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18 highlighted above. Accordingly, the 35 U.S.C. §103 rejection of claim 18 should be withdrawn.

Claims 19, 20, and 26

Claims 19, 20 and 26 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Kinjo* and *Hillebrand* in view of *Lawton*. For the purpose of responding to the outstanding Office Action, it is assumed by Applicant that claims 19, 20, and 26 are rejected as allegedly being unpatentable over *Kinjo* and *Hillebrand* in view of *Lawton*. Applicant submits that the pending dependent claims 19, 20, and 26 contain all features of their respective independent claim 18. Since claim 18 should be allowed, as argued hereinabove, pending dependent claims 19, 20, and 26 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). Furthermore, these dependent claims recite patentably distinct features and/or combinations of features that make them allowable, notwithstanding the allowability of their base claim 18.

For example, claim 26 recites "wherein said face detector is configured to identify a plurality of faces in said graphical image, and wherein said image enhancer is configured to automatically enhance each of said detected faces." For at least the reasons set forth herein in the arguments for allowance of claims 23 and 28, Applicant respectfully asserts that the cited art fails to suggest the foregoing features of claim 26. Accordingly, the 35 U.S.C. §103 rejection of claim 26 should be withdrawn, notwithstanding the allowability of independent claim 18.

Claim 21

Claim 21 presently stands rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Kinjo* and *Hillebrand* in view of *Lawton*. Claim 21 reads as follows:

> 21. An automatic image enhancing method, comprising:
> storing digital data representative of a graphical image;
> automatically identifying facial data in said digital data;
> automatically locating a portion of said facial data defining a skin blemish; and
> ***manipulating said portion for enhancing an appearance of said blemish within said graphical image, wherein said manipulating is automatically initiated based on said locating,***
> wherein the locating further comprises locating a facial feature within said facial data and determining the likely proximity of said blemish to said facial feature. (Emphasis added).

For at least the reasons set forth hereinabove in the arguments for allowance of claim 1, Applicant respectfully asserts that the cited art fails to suggest at least the features of claim 21 highlighted above. Accordingly, the 35 U.S.C. §103 rejection of claim 21 should be withdrawn.

Claim 27

Claim 27 presently stands rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Kinjo* and *Hillebrand* in view of *Lawton*. Applicant submits that the pending dependent claim 27 contains all features of its independent claim 21. Since claim 21 should be allowed, as argued hereinabove, pending dependent claim 27 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). Furthermore, this dependent claim recites patentably distinct features and/or combinations of features that make it allowable, notwithstanding the allowability of its base claim 21.

In this regard, claim 27 recites "wherein said identifying comprises identifying a plurality of faces in said graphical image, and wherein said method comprises automatically enhancing each of said faces based on said manipulating." For at least the reasons set forth herein in the arguments for allowance of claims 23 and 28, Applicant respectfully asserts that the cited art fails to suggest the foregoing features of claim 27. Accordingly, the 35 U.S.C. §103 rejection of claim 27 should be withdrawn, notwithstanding the allowability of independent claim 21.

Claim 24

Claim 24 presently stands rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Kinjo* and *Hillebrand* in view of *Lawton*. Applicant submits that the pending dependent claim 24 contains all features of its independent claim 9. Since claim 9 should be allowed, as argued hereinabove, pending dependent claim 24 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). Furthermore, this dependent claim recites patentably distinct features and/or combinations of features that make it allowable, notwithstanding the allowability of its base claim 9.

In this regard, claim 24 recites "wherein said graphical image contains a plurality of faces, wherein said face detecting means is configured to automatically detect each of said faces, and wherein said image enhancing means is configured to automatically enhance each of said detected faces." For at least the reasons set forth herein in the arguments for allowance of claims 23 and 28, Applicant respectfully asserts that the cited art fails to suggest the foregoing features of claim 24. Accordingly, the 35 U.S.C. §103 rejection of claim 24 should be withdrawn, notwithstanding the allowability of independent claim 9.

Claim 28

Claim 28 presently stands rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Kinjo* and *Hillebrand* in view of *Lawton*. Claim 28 presently reads as follows:

> 28. An automatic image enhancement system, comprising:
> memory for storing digital data that defines a graphical image, *said graphical image containing a plurality of faces;*
> *a face detector configured to detect each of said faces;* and
> *an image enhancer* configured to analyze said faces, said image enhancer further *configured to automatically detect and enhance at least one respective facial blemish in each of said faces,* wherein the image enhancer is configured to detect each said facial blemish by searching a respective one of said detected faces for a particular facial feature and determining the likely proximity of the facial blemish relative to the particular facial feature. (Emphasis added).

Applicant respectfully asserts that the cited art fails to suggest at least the features of claim 28 highlighted above. Thus, the 35 U.S.C. §103 rejection of claim 28 is improper.

In this regard, it is asserted in the Office Action that *Kinjo* discloses a "face detector," but it is candidly admitted in the Office Action that *Kinjo* fails to disclose an "image enhancer," as recited by claim 28. It is then asserted in the Office Action that such an "image enhancer" is disclosed by *Hillebrand*. Applicant observes, however, that *Hillebrand* suggests enhancing only a single face within a graphical image and, in particular, fails to suggest enhancing multiple faces. Thus, the cited art fails to suggest "an image enhancer... automatically configured to detect and enhance at least one facial feature *in each of said faces,*" as described by claim 28. (Emphasis added).

For at least the reasons set forth above, Applicant respectfully asserts that the cited art is inadequate for rejecting claim 28 under 35 U.S.C. §103. Accordingly, the 35 U.S.C. §103 rejection of claim 28 should be withdrawn.

Teaches Away

Applicant respectfully asserts that, when *Hillebrand* is properly viewed as whole, it becomes apparent that *Hillebrand* teaches away from at least the features of claim 28 highlighted above and, therefore, should not be used to reject claim 28 under 35 U.S.C. §103. In this regard, "prior art references before the tribunal must be read as a whole and consideration *must* be given where the references diverge and teach away from the claimed invention." *Akzo N.V. v. U.S. International Trade Commission*, 808 F.2d 1471, 1481, 1 U.S.P.Q.2d 1291 (Fed. Cir. 1986), *cert. denied*, 482 U.S. 909 (emphasis added).

Throughout the Description of the Preferred Embodiments, *Hillebrand* consistently refers to a facial image of a single person. See, e.g., column 3, line 67; column 4, lines 61-62; column 5, lines 11-12, 27, 39, 43, 50-51, and 56-57; column 8, line 34; and column 11, line 56. Further, each graphical image depicted in *Hillebrand* is a facial close-up of a single person. See Figures 5, 7, 11-14, and 16. In addition, at column 3, lines 52-57, and column 4, line 63, through column 5, line 3, *Hillebrand* describes various steps that should be taken to improve the quality of image acquisition of "the person's face." The combination of all of the foregoing teachings in *Hillebrand* suggests the acquisition of a single facial image.

Indeed, *Hillebrand* specifically teaches that "the lights 118 and the digital image generator 120 (e.g., a camera) may be positioned after the person's face is positioned in order to maximize image quality." Column 4, lines 64-67. One of ordinary skill in the art would realize that such steps are most effective when they are applied to a single face since the lighting provided by the same light source or sources will likely provide different results for different faces. Further, it is readily apparent that including multiple faces in the same image, unlike Figures 11-14, for example, would likely result in reduced resolution for each face thereby decreasing the "image quality" of the face of the "analyzed person." Moreover, one of ordinary skill in the art, upon properly considering all of the teachings of *Hillebrand*,

would be discouraged from acquiring multiple faces in the same graphical image, and

Hillebrand, therefore, teaches away from the claimed invention, as defined by pending claim

28. "A reference may be said to teach away when a person of ordinary skill, upon reading

the reference, would be discouraged from following the path set out in the reference, or

would be led in a direction divergent from the path that was taken by the applicant." *In re*

Gurley, 2 F.3d 551, 31 U.S.P.Q.2d 1130, 1131 (Fed. Cir. 1994).

In responding to similar arguments set forth in the Fourth Response filed on May 31,

2005, it is asserted in the Office Action that:

> "It is also argued that Hillebrand teaches away from the claimed invention
> in claims 28-30 because Hillebrand appears to operate on a close up image of
> a single face and that this teaches away from using the enhancement device on
> multiple facial portions detected in an image. Examiner submits that Kinjo
> detects multiple facial image candidates and that once a face or an area is
> detected and selected within an image that any processing taught by
> Hillebrand on such a section could be obviously applied to another such
> detected section. Anyone of ordinary skill in the art of image processing
> would know to process multiple sections within an image to the camera
> positioning and lighting for a single face. Examiner also submits that lighting
> in a single photograph would be expected to be similar. If the lighting is
> similar enough to detect multiple faces, it is similar enough to enhance
> multiple faces accordingly." Page 5-6

The above Office Action arguments, like the Office Action arguments regarding claim 1,

seem to improperly focus on what the system of *Hillebrand could* do, not what the teachings

of *Hillebrand* reasonably suggest, as a whole, as being *desirable* to do. Moreover, Applicant

respectfully maintains that *Hillebrand* teaches away from the claimed invention and that the

rejection of claim 28 is based on improper hindsight reconstruction of Applicant's invention.

Accordingly, Applicant submits that *Hillebrand* should not be used to reject claim 28 under

35 U.S.C. §103.

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Claim 29

Claim 29 presently stands rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Kinjo* and *Hillebrand* in view of *Lawton*. Claim 29 presently reads as follows:

> 29. An automatic image enhancing method, comprising:
> storing digital data that defines a graphical image;
> ***automatically detecting a plurality of faces in said graphical image;***
> ***automatically analyzing said faces to detect at least one respective facial blemish in each of said faces; and***
> ***automatically enhancing, based on said analyzing, at least one respective facial blemish detected in each of said faces,***
> wherein said analyzing comprises, for each of said faces:
> searching the respective face for a particular facial feature;
> determining the likely proximity of a facial blemish to be enhanced relative to the particular facial feature; and
> locating the facial blemish to be enhanced based on said determining.
> (Emphasis added).

For at least the reasons set forth hereinabove in the arguments for allowance of claim 28, Applicant respectfully asserts that the cited art fails to suggest at least the features of claim 29 highlighted above. Accordingly, the 35 U.S.C. §103 rejection of claim 29 should be withdrawn.

Claim 30

Claim 30 is indicated as being rejected in the Office Action under 35 U.S.C. §103, but the cited art basis of such rejection is not clear to Applicant. For the purpose of responding to the outstanding Office Action, it is assumed by Applicant that claim 30 is rejected as allegedly being unpatentable over *Kinjo* and *Hillebrand* in view of *Lawton*. Applicant submits that the pending dependent claim 30 contains all features of its independent claim 29. Since claim 29 should be allowed, as argued hereinabove, pending dependent claim 30 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

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CONCLUSION

Applicant respectfully requests that all outstanding objections and rejections be withdrawn and that this application and all presently pending claims be allowed to issue. If the Examiner has any questions or comments regarding Applicant's response, the Examiner is encouraged to telephone Applicant's undersigned counsel.

Respectfully submitted,

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